



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/729,768	12/06/2000	Keun Ok Lim	HI-029	7722
34610	7590	11/16/2005	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			OPSASNICK, MICHAEL N	
			ART UNIT	PAPER NUMBER
			2655	

DATE MAILED: 11/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/729,768	Applicant(s) LIM, KEUN OK	
	Examiner Michael N. Opsasnick	Art Unit 2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/6/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7-16 and 18-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7-16 and 18-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2655

DETAILED ACTION

1. Upon updating the search, the examiner has found multiple pertinent applicable references to the claims that have been published since the mailing date of the final office action; therefore the finality of the office action dated 2/7/05 has been removed and prosecution on the merits has been reopened.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5,7-16,18-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ittycheriah et al (5452397) in view of Netsch et al (5167004) in further view of Morgan et al (6937984).

As per claims 1,3,7,11, 12 and 24, Ittycheriah et al (5452397) teaches a method for increasing voice recognition rate in a voice recognition system comprising the steps of establishing a reference model for user voices subjected to recognition (as enrolling phrase of the user – fig. 6);

Art Unit: 2655

“receiving the user voices for voice recognition commands” as speaker recognized voice command (Fig. 6, col. 3 lines 10-20, col. 5 lines 9-10\, col. 8 lines 45-51);

“detecting the range and characteristics of the received voice data” as detecting the energy base of the input voice data and determining acoustic vectors (Fig. 2)

“comparing the range.....largest similarity” as comparing the characteristics of the utterance with the stored model (col. 4 lines 52-68)

“comparing the similarity of the retrieved word.....similarity reference.....report a voice recognition failure.....report a voice recognition success.....reference value” searching for the best word based on the models loaded, returning the best model and a score, determining if it is a match or not (Fig. 3; fig. 6, col. 6 lines 40-67)

“modifying the characteristics.....recognition” as updating the model database for accepted phrases (col. 6 line 1-26)

Ittycheriah et al (5452397) does not explicitly teach updating the model after a successful recognition, however, Netsch et al (5167004) teaches updating the model after a successful recognition (col. 4 lines 64-69). Therefore, it would have been obvious to one of ordinary skill in the art of recognition to modify the teachings of Ittycheriah et al (5452397) with updating the models after a successful recognition because the new result would advantageously improve the accuracy of the recognition process (Netsch et al (5167004), col. 1 line 67 – col. 2 line 5).

The combination of Ittycheriah et al (5452397) in view of Netsch et al (5167004) teaches the use of the speech recognition device for speech commands (in particular, Ittycheriah et al, col. 3 lines 28-34), but the combination is silent as to eventual command performance. However, Morgan et al (6937984) teaches notifying the user of the recognized command, and executing the command (Morgan et al (6937984), col. 2 lines 50-58). Therefore, it would have been obvious to one of ordinary skill in the art of speech command systems to modify the combination of Ittycheriah et al (5452397) in view of Netsch et al (5167004) with a recognition result and execution of a recognized command because it would advantageously provide the user with command recognition feedback while in a 'hands-free' environment (Morgan et al (6937984), col. 2 lines 30-45).

As per claims 2,4,5,8,9,25, the combination of Ittycheriah et al (5452397) in view of Netsch et al (5167004) in further view of Morgan et al (6937984) teaches extracting features for use in a HMM (Ittycheriah et al (5452397), col. 3 line 50-65).

As per claims 6,7,10-14,17,26,27, the combination of Ittycheriah et al (5452397) in view of Netsch et al (5167004) in further view of Morgan et al (6937984) teaches the claim limitations pertaining to comparing the models to reference models, selecting the best match based on a comparison, and negatively or positively confirming a match (Ittycheriah et al (5452397) col. 6, lines 1-26; examiner notes that Ittycheriah et al (5452397) teaches replacement of the old phrase with the newly accepted phrase, and

Art Unit: 2655

therefore, the voice model characteristics have change because the new model contains the accepted new version of the phrase and therefore the model characteristics, including the vectors, are changed)).

As per claims 15, 16, the combination of Ittycheriah et al (5452397) in view of Netsch et al (5167004) in further view of Morgan et al (6937984) teaches phrase matching (Ittycheriah et al (5452397), col. 5 line 50 – col. 6 line 9).

As per claims 18-23, the combination of Ittycheriah et al (5452397) in view of Netsch et al (5167004) in further view of Morgan et al (6937984) teaches command performance prior to modification (as performing the command if there is no problem with the input speech (Ittycheriah et al (5452397), col. 3 lines 30-35), wherein the command can be a word (Ittycheriah et al (5452397), col. 6 lines 38-41; as well as Morgan et al (6937984), col. 2 lines 50-60).

Response to Arguments

4. Applicant's arguments filed 9/6/05 have been fully considered but they are not persuasive. As per applicants' arguments with respect to command performance after matching, examiner refers applicant to the new recitations to the Morgan reference. As per applicant's arguments against block 42 of Ittycheriah et al (5452397), examiner notes that block 42 is the result of a comparison performed in subblock 38.

Art Unit: 2655

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gerson et al (693977) teaches command control dependent upon speech recognition for a wireless system(col. 13 lines 1-22).

Everhart (6928614) teaches voice commands executed after recognition (col. 4 lines 1-26)

Swartz et al (6853293)


Dowling et al (6873850)

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Wayne Young, can be reached at (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mno
11/9/05


W. R. YOUNG
PRIMARY EXAMINER